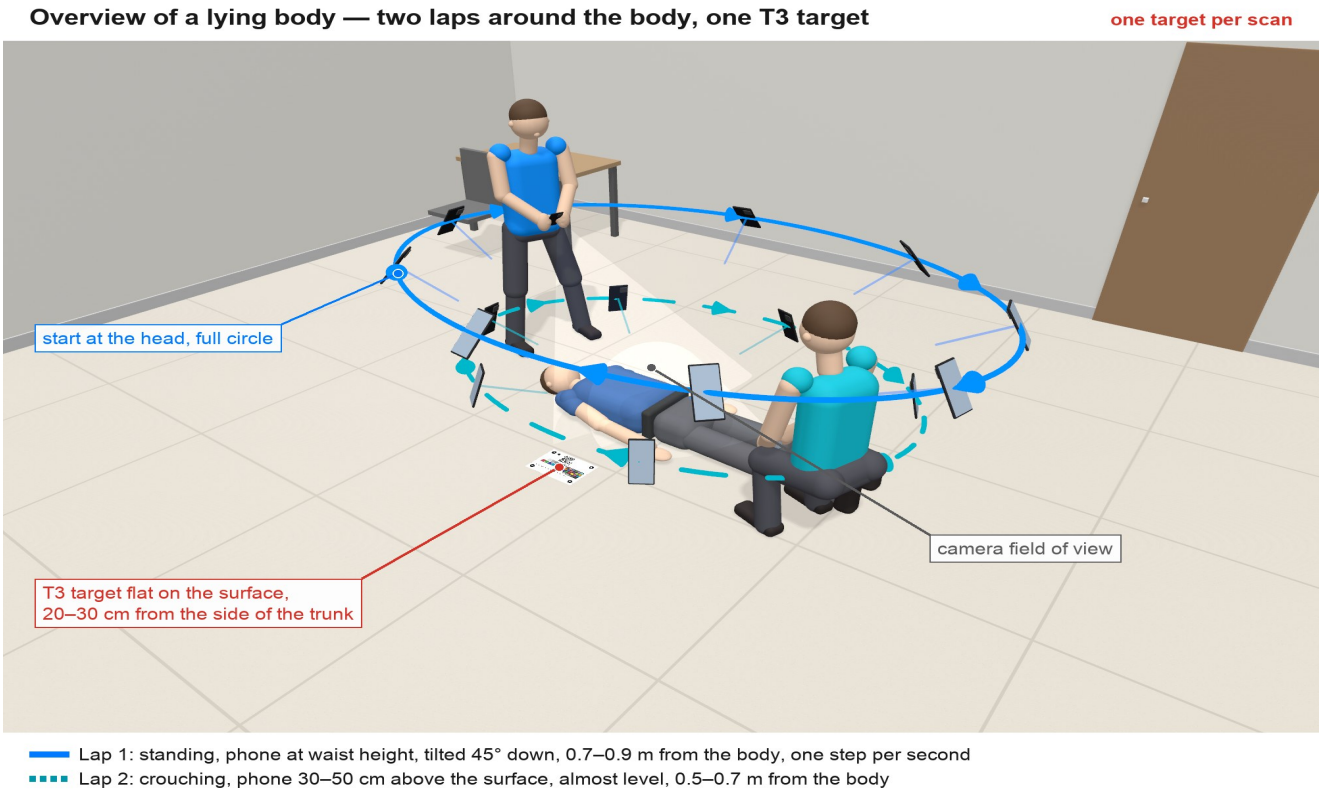
aPrehliadky — Crime-scene examination: body and surroundings

Procedure for homicide and suspicious death · one case, several scans · version 3.2 · forensika.eu

In a homicide the position of the body in the room, its relation to objects, traces and doors is a finding in itself — not only the body. One scan cannot capture all of it at the resolution a court needs: a whole body with the room is a metre-scale view, a wound is a millimetre-scale one. The examination is therefore made of several scans of one case: an overview of the body with its surroundings (one session in four steps), separate details of findings and — when needed — a separate scan of the wider surroundings. All carry the same case reference, the library groups them and the overview report lists them.



Overview of a lying body: laps at different heights, targets flat by the trunk and by the feet.

What to know about the limits

- Photogrammetry on the iPhone takes at most 200 frames (Apple's limit, verified on iPhone 17 Pro). From 3.1 a session therefore captures up to 600 frames: the iPhone computes a preview from the best 200 (the sharpest of each path segment), the full model from all frames comes from the Mac (Fotograme3ka 3D, limit 1,500). The frame counter turns orange above 200 — that is fine, just plan on the Mac.
- The number of scans per case is not limited. Every scan is a separate session with its own .f3d package, report and certificate; the case reference (e.g. “2026-0914-Nitra”) holds them together. Enter it identically for every scan — the library groups them into one section.

- A detail scan is not merged geometrically with the overview (another session, another coordinate frame, an order of magnitude finer resolution). The link is logical: mark the finding on the overview model and choose a Detail scan in its sheet — the overview report then lists the detail scan with its measurements under the finding.
- Surroundings from LiDAR (room mesh) are produced alongside every scan when enabled — metric, untextured, nothing filled in. Measure distances of the body from walls and objects there (scan screen → Surroundings from LiDAR).

Examination plan — what, in what order and why

Preparation (5 min)

T3 targets (2–4 for a whole body, tape-measure the distances between their centres), diffuse light without flash, charged iPhone Pro, 3 GB free. Photographic documentation by your institution's practice goes before the scan — the scan complements it, it does not replace it.

Scan A — Body overview with surroundings

Profile Deceased, extent Overview, mode Silent — 4K video, LiDAR surroundings on. Centre = trunk. Four steps (switch above the coach hint): 1 Overview standing, phone tilted about 45°, one calm lap at 1–1.8 m · 2 Detail + target kneeling at body level, two laps: phone horizontal (side view) and phone vertical (looking down), 0.4–1 m, targets in view as often as possible · 3 Fill gaps by the dark wedges on the radar and the “Fill the gaps” hint · 4 Surroundings from 1.5–3 m: floor around the body, traces, objects, furniture, door, window. 300–600 frames in total, 6–10 minutes.

Output: one model of the body with the floor and nearby objects (Mac: extent Subject with surroundings or Whole scene), plus the LiDAR room mesh.

Scans B1…Bn — Details of findings

For every finding that will be measured to the millimetre (wound, gunshot entry, ligature, tattoo): profile Deceased, extent Detail, T3 target right beside the finding in the plane of the skin, 0.3–0.5 m, one lap around the finding at two heights, 60–120 frames. Same case reference. After processing, tap the finding in overview model A → Detail scan → choose B.

Output: a model of the finding at ~0.3 mm resolution, measurements with ± U, class A certificate.

Variant: seated deceased (chair, armchair, car)

In the new scan choose Body position: Seated. Scan centre on the chest. Two targets: A on the floor in front of the feet, B beside the chair (tape A–B → Control network). Three laps: 1 standing, phone at the seated head height (~1.25 m) tilted down · 2 at chest level (~0.85 m) level · 3 crouching (~0.35 m) tilted slightly up — legs, feet, under the seat. Closer behind the backrest (0.5 m). The back against the backrest and the rear of the thighs are occluded — a hole in the model, into the note. In a car: centre on the chest through the open door, capture from both sides through the doors, not through the glass; target on the passenger seat.

Output: a model of the seated person with the chair and floor; sitting height, head position relative to the backrest, hand–object (glass, medication, weapon) as Distance; body length as Polyline.

Scan C — Wider surroundings (optional)

When the whole room or several rooms matter (the perpetrator's path, blood traces on walls, a weapon elsewhere): profile Object or Deceased, extent Overview, centre = centre of the room, step 4 Surroundings from the start, 1.5–3 m from the walls, 300–600 frames; a target on the floor in the middle. Computed on the Mac, extent Whole scene.

Output: a textured room model; the LiDAR mesh as a metric check of distances.

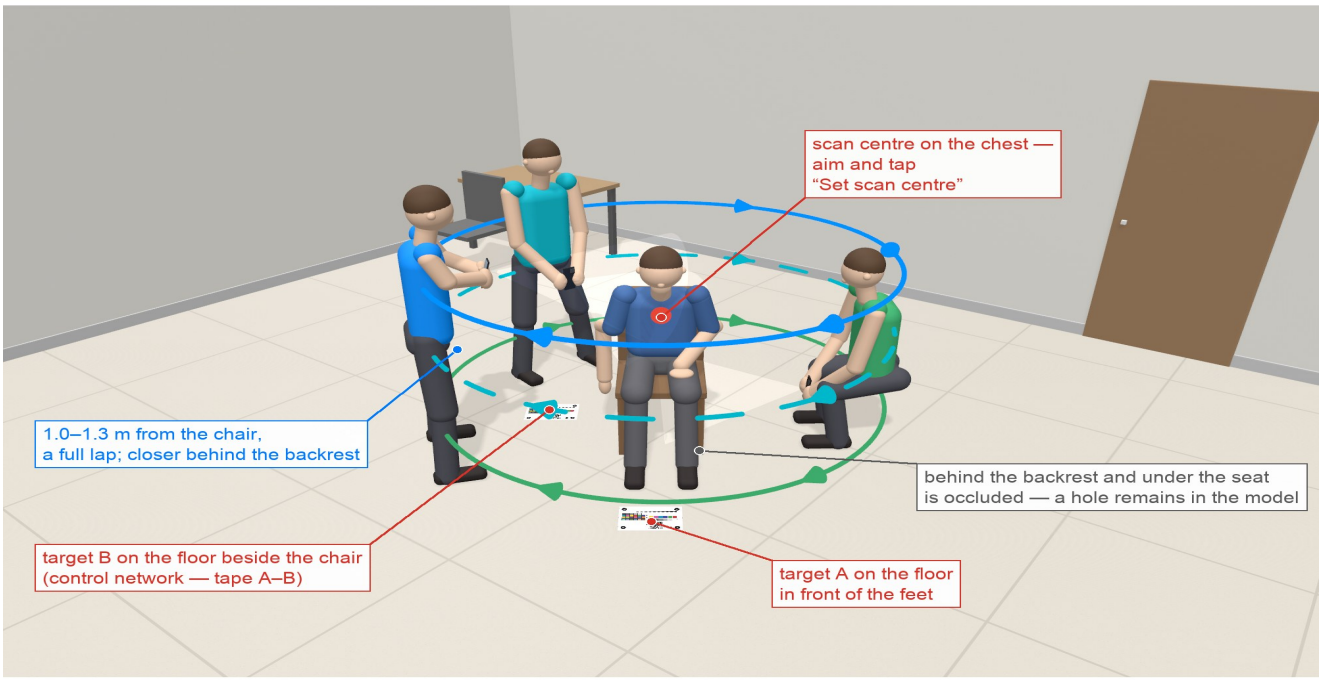
Processing

After every scan the iPhone starts processing (preview, minutes). For A and C then Export package with frames for the Mac → Fotograme3ka 3D → detail Medium/Custom → package back to the iPhone (findings carry over). Details B are fine from the iPhone; on the Mac they come out finer.

Measuring, findings, report

On model A: findings (pins) and coarse dimensions, relations in the LiDAR mesh (body–wall, body–door, weapon–hand). On models B: millimetre measurements (Distance, Path along the surface, Area, Lasso). On every scan: Target print check, Control network (A), reference, Documentation class A/B. Export: report PDF and certificate from every scan; report A lists the other scans of the case and the detail scans under the findings. Archive every scan (package with frames, SHA-256).

Seated deceased — three laps around the chair, two T3 targets



Seated deceased: three laps around the chair (head · chest · crouch), scan centre on the chest, target A in front of the feet, target B beside the chair.

Which method for what

What I measure	Scan and tool	Expected U
Wound length, entry width, bruise size	Detail scan B, Distance / Path (curved surface) / Area or Lasso; Apple Pencil or Fine-tune with the loupe	± 1–2 mm (k = 2)

What I measure	Scan and tool	Expected U
Body length, span, limb position	Overview A (Mac). Extended body: Distance crown–heel. Flexed limbs: Polyline crown–hip joint–knee–heel (sum of segments ≈ stature). Zoom in on every point, Fine-tune with the loupe; the target control network gives the scale over the whole length. From above the heel is hidden — the end point is the ankle (−5 to −8 cm).	± 5–15 mm
Distance of the body from a wall, door, object	Surroundings from LiDAR (metric mesh), Distance; check in model A	± 10–20 mm
Distance of a hand from a weapon / phone / object	Model A (extent Subject with surroundings — the object must be in the model), Distance from the fingertip to the nearest edge of the object; check in Surroundings from LiDAR; if the object is farther than ~1.5 m from the trunk, scan C	± 10–20 mm
Blood traces on floor / wall, their size	Scan C or step 4 of scan A from 1–1.5 m; Area / Lasso; for traces under 5 cm a separate Detail	± 3–5 mm
Circumference (neck, limb), ligature	Detail B or A from kneeling; Path along the surface all the way round	± 3–5 mm
Colour fidelity (livor, bruises)	ColorChecker Classic Mini in the T3.1 target cut-out + Colorime3ka	—

Order and time budget (indicative)

1. 0:00 — institutional photo documentation, place the targets, tape-measure their distances, write them down.
2. 0:10 — scan A (4 steps, 6–10 min). Do not interrupt; react at once to the coach's “Slower” / “Fill the gaps”.
3. 0:20 — scans B for 2–5 key findings (2–3 min each). Move the target to each finding anew.
4. 0:35 — scan C if needed (5–8 min).
5. 0:45 — on site: check the previews (nothing missing? radar green?), enter the Target print check and the Control network, export packages A and C for the Mac (AirDrop). Re-capture is possible only now — not after leaving the scene.
6. Later: Mac processing of A and C, assigning details to findings, measurements, reports, certificates, archive.

The model never fills anything in: what the camera did not see is missing from the model (a hole). The hidden side of a body against a wall, the underside of objects and occlusions remain undocumented — write it into the scan note. A measurement is defensible only with the target, a green scale row and the uncertainty stated.